

# Trauma Scenario 2 Refresher Course

*This is a Teaching Scenario. Some flexibility in how it progresses is possible according to individual learner needs*

**History** {initial candidate briefing prior to arrival of child}

A 7 year old boy wearing a helmet was riding a quad bike with an older sibling, who swerved to avoid a tree. The boy was thrown at speed into the tree and is brought into hospital by family.

Estimated weight 25 kg.

**Initial impression** {provide information as candidate assesses child and applies monitoring}

On arrival, the boy is screaming and writhing in agony. RR 30, SpO<sub>2</sub> 95% in air. HR 160, BP 79/51, Pale and sweaty, CRT 5. Obvious deformity and swelling of the left mid-thigh and contusions across the lower abdomen.

**Clinical Course** {to be given to candidate as they progress}

He has ongoing severe pain and has severe pelvic tenderness and genital bruising, he then deteriorates with worsening perfusion and increasing tachycardia. He becomes apnoeic, unresponsive and pulseless. ROSC with BVM ventilation, rapid fluid resuscitation, 2 x boluses of 10 ml/kg warmed crystalloid or blood.

Perfusion remains very poor until he receives further 2 x boluses of warmed blood products as well as TXA. His haemodynamics indicate the need for urgent surgical consultation, or retrieval.

**INSTRUCTORS INFORMATION**

**Key Treatment Points**



|                             |   |  |
|-----------------------------|---|--|
| <C>                         | Assess for and control external bleeding                              |  |
| <b>Airway &amp; C-spine</b> | Establish airway patency  |  |
|                             | Protect cervical spine  |  |
|                             | High flow O <sub>2</sub> via face mask                                |  |
|                             | Titrate O <sub>2</sub> therapy to SpO <sub>2</sub> 94-98% when stable |  |
| <b>Breathing</b>            | BVM ventilation with 100% O <sub>2</sub>                              |  |
|                             | Arrange urgent airway management and ventilation                      |  |
| <b>Circulation</b>          | TCA protocol  |  |
|                             | IV access by 2, blood for crossmatch etc                              |  |
|                             | Early use of blood & 15 mg/kg tranexamic acid                         |  |
|                             | Massive transfusion protocol  |  |
|                             | Pelvic binder, traction on femoral fracture                           |  |
| <b>General Therapy</b>      | Analgesia   |  |
|                             | Arrange for urgent surgical assessment                                |  |
|                             | ICU / Retrieval service   |  |

**Diagnosis:** Hypovolemic shock/PEA from pelvic fracture and closed femoral fracture.

**Learning objectives**

At the end of this session participants should be able to:

- Apply the structured approach to management and diagnosis during PEA in TCA
- Recall and consider application of management of TCA in their own practice
- Recall and apply the principles of management of hypovolemic shock and massive transfusion in their own practice

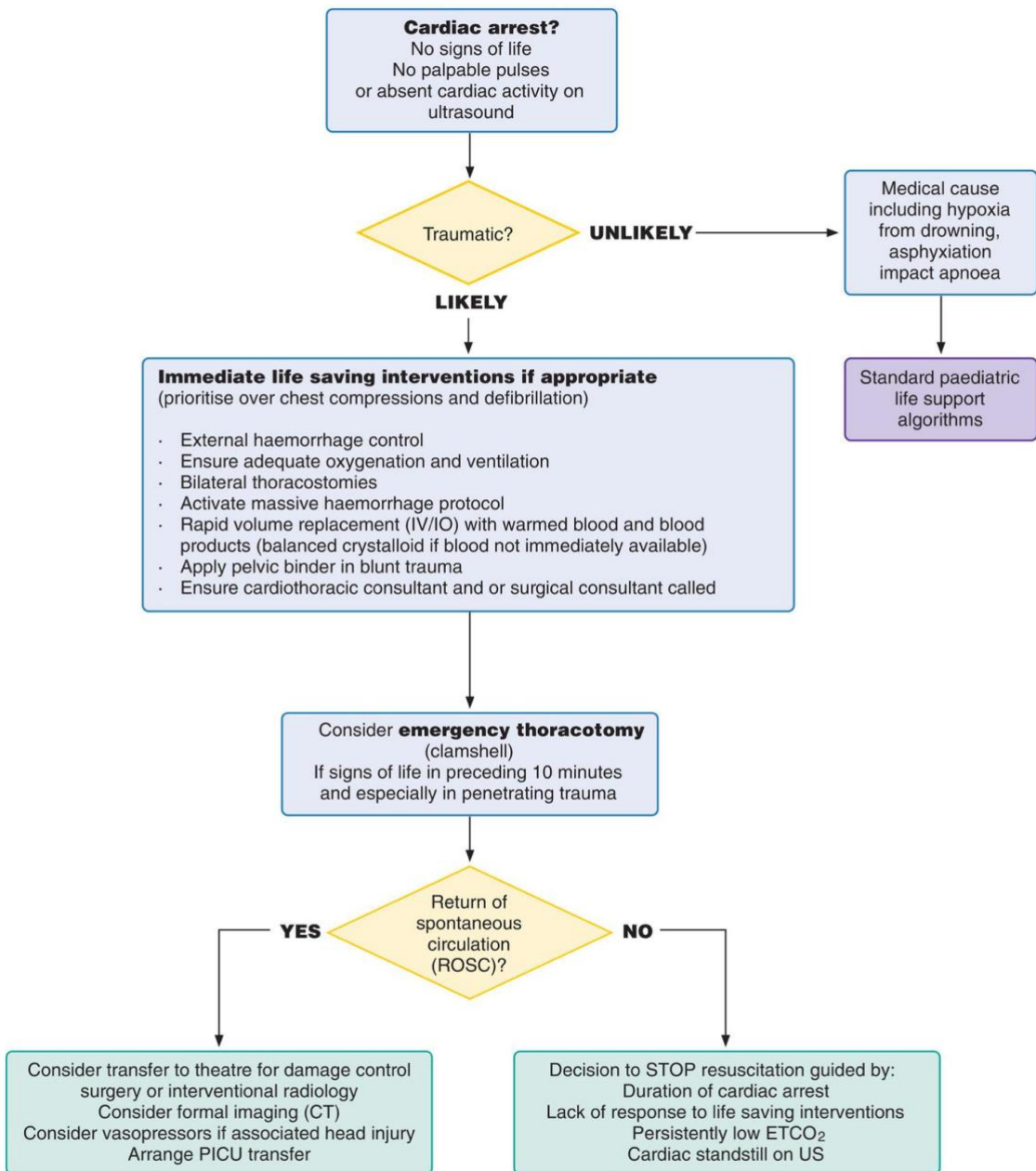
**Scenario 2 is intended to trigger discussion on traumatic PEA arrest and how the likely causes and definitive treatments differ from non-traumatic PEA.**

Depending upon candidate progression in the scenario, a pause and discuss technique may be an appropriate technique for this scenario.

Instructor resources regarding paediatric traumatic cardiac arrest (TCA) in below:

- [ANZCOR Guideline 12.4 – Paediatric Resuscitation in Special Circumstances](#)
- [Paediatric traumatic cardiac arrest: the development of an algorithm to guide recognition, management and decisions to terminate resuscitation](#)

**Paediatric traumatic cardiac arrest**



**Figure 15.2 Paediatric traumatic cardiac arrest algorithm**

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